

=> file biosis caba caplus embase japio lifesci medline scisearch

=> e vermeij paul/au

```
E1          1      VERMEIJ P CLAUDIA WIETEK/AU
E2          1      VERMEIJ P DR/AU
E3         35 --> VERMEIJ PAUL/AU
E4        106      VERMEIJ PIETER/AU
E5          1      VERMEIJ POST J/AU
E6          1      VERMEIJ POST JANINE/AU
E7         14      VERMEIJ R/AU
E8         18      VERMEIJ R J/AU
E9          6      VERMEIJ ROLF/AU
E10         1      VERMEIJ ROLF J/AU
E11        23      VERMEIJ RUDOLF J/AU
E12         1      VERMEIJ RUDOLF JACQUES/AU
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=> s e1-e6 and lawsonia

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L1          11 ("VERMEIJ P CLAUDIA WIETEK"/AU OR "VERMEIJ P DR"/AU OR "VERMEIJ
              PAUL"/AU OR "VERMEIJ PIETER"/AU OR "VERMEIJ POST J"/AU OR "VERMEIJ POST JANINE"/AU) AND LAWSONIA
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=> dup rem l1

PROCESSING COMPLETED FOR L1

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L2          11 DUP REM L1 (0 DUPLICATES REMOVED)
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=> d bib ab kwic 1-

YOU HAVE REQUESTED DATA FROM 11 ANSWERS - CONTINUE? Y/(N):y

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L2  ANSWER 1 OF 11  BIOSIS  COPYRIGHT (c) 2010 The Thomson Corporation  on STN
AN  2010:172480  BIOSIS <<LOGINID::20100916>>
DN  PREV201000172480
TI   ***Lawsonia***  intracellularis subunit vaccine.
AU   ***Vermeij, Paul***  [Inventor]; Anonymous
CS   St Anthonis, Netherlands
ASSIGNEE: Intarvet International B V
PI   US 07662390 20100216
SO   Official Gazette of the United States Patent and Trademark Office Patents,
      (FEB 16 2010)
      CODEN: OGUPE7. ISSN: 0098-1133.
DT   Patent
LA   English
ED   Entered STN: 24 Mar 2010
      Last Updated on STN: 24 Mar 2010
AB   The present invention relates to nucleic acid sequences encoding novel
      ***Lawsonia***  intracelluaris proteins. It furthermore relates to DNA
      fragments, recombinant DNA molecules and live recombinant carriers
      comprising these sequences. Also it relates to host cells comprising such
      nucleic acid sequences, DNA fragments, recombinant DNA molecules and live
      recombinant carriers. Moreover, the invention relates to proteins encoded
      by these nucleotide sequences and to their use for the manufacturing of
      vaccines. The invention also relates to vaccines for combating
      ***Lawsonia***  intracellulairs infections and methods for the
      preparation thereof. Finally the invention relates to diagnostic tests
      for the detection of ***Lawsonia***  intracellularis DNA, the detection
      of ***Lawsonia***  intracellularis antigens and of antibodies against
      ***Lawsonia***  intracellularis.
TI   ***Lawsonia***  intracellularis subunit vaccine.
AU   ***Vermeij, Paul***  [Inventor]; Anonymous
```

AB The present invention relates to nucleic acid sequences encoding novel
Lawsonia intracellularis proteins. It furthermore relates to DNA
fragments, recombinant DNA molecules and live recombinant carriers
comprising these sequences. Also it. . . these nucleotide sequences
and to their use for the manufacturing of vaccines. The invention also
relates to vaccines for combating ***Lawsonia*** intracellularis
infections and methods for the preparation thereof. Finally the invention
relates to diagnostic tests for the detection of ***Lawsonia***
intracellularis DNA, the detection of ***Lawsonia*** intracellularis
antigens and of antibodies against ***Lawsonia*** intracellularis.

IT Major Concepts

Pharmacology; Infection; Human Medicine (Medical Sciences)

IT Diseases

Lawsonia intracellularis infection: bacterial disease,
prevention and control

IT Chemicals & Biochemicals

Lawsonia intracellularis subunit vaccine: immunologic-drug,
immunostimulant-drug

L2 ANSWER 2 OF 11 BIOSIS COPYRIGHT (c) 2010 The Thomson Corporation on STN

AN 2009:424780 BIOSIS <<LOGINID::20100916>>

DN PREV200900425883

TI ***Lawsonia*** intracellularis vaccine.

AU Jacobs, Antonius Arnoldus Christiaan [Inventor]; Anonymous;

Vermeij,

*** Paul*** [Inventor]

CS Boxmeer, Netherlands

ASSIGNEE: Intervet International B V

PI US 07491401 20090217

SO Official Gazette of the United States Patent and Trademark Office Patents,
(FEB 10 2009)

CODEN: OGUPE7. ISSN: 0098-1133.

DT Patent

LA English

ED Entered STN: 15 Jul 2009

Last Updated on STN: 15 Jul 2009

AB The present invention relates i.a. to nucleic acid sequences encoding
novel ***Lawsonia*** intracellularis proteins. It furthermore relates
to DNA fragments, recombinant DNA molecules and live recombinant carriers
comprising these sequences. Also it relates to host cells comprising such
nucleic acid sequences, DNA fragments, recombinant DNA molecules and live
recombinant carriers. Moreover, the invention relates to proteins encoded
by these nucleotide sequences. The invention also relates to vaccines for
combating ***Lawsonia*** intracellularis infections and methods for
the preparation thereof. Finally the invention relates to diagnostic
tests for the detection of ***Lawsonia*** intracellularis DNA, the
detection of ***Lawsonia*** intracellularis antigens and of antibodies
against ***Lawsonia*** intracellularis.

TI ***Lawsonia*** intracellularis vaccine.

AU Jacobs, Antonius Arnoldus Christiaan [Inventor]; Anonymous;

Vermeij,

*** Paul*** [Inventor]

AB The present invention relates i.a. to nucleic acid sequences encoding
novel ***Lawsonia*** intracellularis proteins. It furthermore relates
to DNA fragments, recombinant DNA molecules and live recombinant carriers
comprising these sequences. Also it. . . carriers. Moreover, the
invention relates to proteins encoded by these nucleotide sequences. The

invention also relates to vaccines for combating ***Lawsonia*** intracellularis infections and methods for the preparation thereof. Finally the invention relates to diagnostic tests for the detection of ***Lawsonia*** intracellularis DNA, the detection of ***Lawsonia*** intracellularis antigens and of antibodies against ***Lawsonia*** intracellularis.

IT Major Concepts
Pharmacology; Clinical Immunology (Human Medicine, Medical Sciences); Infection

IT Diseases
Lawsonia intracellularis infection: bacterial disease, drug therapy

IT Chemicals & Biochemicals
Lawsonia intracellularis vaccine: immunologic-drug, immunostimulant-drug, vaccine

L2 ANSWER 3 OF 11 CAPLUS COPYRIGHT 2010 ACS on STN

AN 2009:1500289 CAPLUS <<LOGINID::20100916>>

DN 152:9929

TI Vaccine comprising carbohydrate composition from ***Lawsonia*** intracellularis cell membrane and combination vaccines comprising the same

IN Jacobs, Antonius Arnoldus Christiaan; ***Vermeij, Paul*** ; Segers, Ruud Philip Antoon Maria; Schrier, Carla Christina

PA Intervet International B.V., Neth.

SO PCT Int. Appl., 21 pp.

CODEN: PIXXD2

DT Patent

LA English

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 2009144088	A2	20091203	WO 2009-EP54516	20090416
	WO 2009144088	A3	20100506		
	W:				
	AE, AG, AL, AM, AO, AT, AU, AZ, BA, BB, BG, BH, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DO, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, GT, HN, HR, HU, ID, IL, IN, IS, JP, KE, KG, KM, KN, KP, KR, KZ, LA, LC, LK, LR, LS, LT, LU, LY, MA, MD, ME, MG, MK, MN, MW, MX, MY, MZ, NA, NG, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RS, RU, SC, SD, SE, SG, SK, SL, SM, ST, SV, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, ZA, ZM, ZW				
	RW:				
	AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HR, HU, IE, IS, IT, LT, LU, LV, MC, MK, MT, NL, NO, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG, BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AP, EA, EP, OA				
PRAI	EP 2008-154764	A	20080418		
	US 2008-46161P	P	20080418		
	EP 2008-105738	A	20081106		
	US 2008-111756P	P	20081106		

AB The present invention pertains to the use of a non-live carbohydrate contg. compn., the carbohydrate being also found in live ***Lawsonia*** intracellularis cells in assocn. with the outer cell membrane of these cells, for the manuf. of a vaccine for protection against an infection with L. intracellularis, the vaccine being in a form suitable for systemic administration. The invention also pertains to a combination vaccine comprising L. intracellularis carbohydrate compn., and antigens from Mycoplasma hyopneumoniae and Porcine circovirus.

II Vaccine comprising carbohydrate composition from ***Lawsonia***
 intracellularis cell membrane and combination vaccines comprising the same
 IN Jacobs, Antonius Arnoldus Christiaan; ***Vermeij, Paul*** ; Segers,
 Ruud Philip Antoon Maria; Schrier, Carla Christina
 AB The present invention pertains to the use of a non-live carbohydrate
 contg. compn., the carbohydrate being also found in live ***Lawsonia***
 intracellularis cells in assocn. with the outer cell membrane of these
 cells, for the manuf. of a vaccine for protection. . .
 ST vaccine carbohydrate ***Lawsonia*** intracellularis cell membrane;
 Lawsonia Mycoplasma Porcine circovirus combination vaccine
 IT Oils
 RL: MOA (Modifier or additive use); THU (Therapeutic use); BIOL
 (Biological study); USES (Uses)
 (Biodegradable; vaccine comprising carbohydrate compn. from
 Lawsonia intracellularis cell membrane and combination
 vaccines
 comprising same)
 IT Paraffin oils
 RL: AGR (Agricultural use); MOA (Modifier or additive use); THU
 (Therapeutic use); BIOL (Biological study); USES (Uses)
 (adjuvant comprises droplets of; vaccine comprising carbohydrate compn.
 from ***Lawsonia*** intracellularis cell membrane and combination
 vaccines comprising same)
 IT ***Lawsonia*** intracellularis
 (carbohydrate compn. from killed; vaccine comprising carbohydrate
 compn. from ***Lawsonia*** intracellularis cell membrane and
 combination vaccines comprising same)
 IT Polysaccharides
 RL: AGR (Agricultural use); THU (Therapeutic use); BIOL (Biological
 study); USES (Uses)
 (compn.; vaccine comprising carbohydrate compn. from ***Lawsonia***
 intracellularis cell membrane and combination vaccines comprising same)
 IT Livestock
 Sus scrofa domestica
 Swine
 (enteritis or ileitis in; vaccine comprising carbohydrate compn. from
 Lawsonia intracellularis cell membrane and combination
 vaccines
 comprising same)
 IT Biodegradable materials
 (oil, adjuvant comprises droplets of; vaccine comprising carbohydrate
 compn. from ***Lawsonia*** intracellularis cell membrane and
 combination vaccines comprising same)
 IT Emulsions
 (oil-in-water, as adjuvant; vaccine comprising carbohydrate compn. from
 Lawsonia intracellularis cell membrane and combination
 vaccines
 comprising same)
 IT Carbohydrates
 RL: AGR (Agricultural use); THU (Therapeutic use); BIOL (Biological
 study); USES (Uses)
 (protein free compn.; vaccine comprising carbohydrate compn. from
 Lawsonia intracellularis cell membrane and combination
 vaccines
 comprising same)
 IT Immunization
 (vaccination; vaccine comprising carbohydrate compn. from

Lawsonia intracellularis cell membrane and combination vaccines comprising same)

IT Cell membrane
 Enteritis
 Ileitis
 Immune adjuvants
 Mycoplasma hyopneumoniae
 Porcine circovirus
 Vaccines
 (vaccine comprising carbohydrate compn. from ***Lawsonia*** intracellularis cell membrane and combination vaccines comprising same)

L2 ANSWER 4 OF 11 CAPLUS COPYRIGHT 2010 ACS on STN

AN 2009:1294282 CAPLUS <<LOGINID::20100916>>

DN 151:446115

TI Combination vaccine for protection against ***Lawsonia*** intracellularis, Mycoplasma hyopneumoniae and porcine circo virus

IN Jacobs, Antonius Arnoldus Christiaan; ***Vermeij, Paul*** ; Segers, Ruud Philip Antoon Maria; Schrier, Carla Christina

PA Intervet International B.V., Neth.

SO PCT Int. Appl., 23pp.

CODEN: PIXXD2

DT Patent

LA English

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 2009127684	A1	20091022	WO 2009-EP54517	20090416
	W: AE, AG, AL, AM, AO, AT, AU, AZ, BA, BB, BG, BH, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DO, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, GT, HN, HR, HU, ID, IL, IN, IS, JP, KE, KG, KM, KN, KP, KR, KZ, LA, LC, LK, LR, LS, LT, LU, LY, MA, MD, ME, MG, MK, MN, MW, MX, MY, MZ, NA, NG, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RS, RU, SC, SD, SE, SG, SK, SL, SM, ST, SV, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, ZA, ZM, ZW				
	RW: AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HR, HU, IE, IS, IT, LT, LU, LV, MC, MK, MT, NL, NO, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG, BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				

PRAI EP 2008-154765 A 20080418

US 2008-46188P P 20080418

AB The present invention pertains to a vaccine comprising in combination non-live antigens of ***Lawsonia*** intracellularis, of Mycoplasma hyopneumoniae and Porcine circo virus, and a pharmaceutically acceptable carrier. The invention also pertains to a kit comprising a first container having non-live antigens of ***Lawsonia*** intracellularis, one or more other containers having Mycoplasma hyopneumoniae and porcine circo virus antigens and instructions for mixing the antigens of ***Lawsonia*** intracellularis, Mycoplasma hyopneumoniae, and Porcine circo virus to formulate one combination vaccine suitable for systemic vaccination.

RE.CNT 6 THERE ARE 6 CITED REFERENCES AVAILABLE FOR THIS RECORD

ALL CITATIONS AVAILABLE IN THE RE FORMAT

TI Combination vaccine for protection against ***Lawsonia*** intracellularis, Mycoplasma hyopneumoniae and porcine circo virus

IN Jacobs, Antonius Arnoldus Christiaan; ***Vermeij, Paul*** ; Segers, Ruud Philip Antoon Maria; Schrier, Carla Christina

AB The present invention pertains to a vaccine comprising in combination non-live antigens of ***Lawsonia*** intracellularis, of Mycoplasma hyopneumoniae and Porcine circo virus, and a pharmaceutically acceptable carrier. The invention also pertains to a kit comprising a first container having non-live antigens of ***Lawsonia*** intracellularis, one or more other containers having Mycoplasma hyopneumoniae and porcine circo virus antigens and instructions for mixing the antigens of ***Lawsonia*** intracellularis, Mycoplasma hyopneumoniae, and Porcine circo virus to formulate one combination vaccine suitable for systemic vaccination.

ST vaccine combination ***Lawsonia*** Mycoplasma porcine circo virus

IT Paraffin oils
 RL: AGR (Agricultural use); MOA (Modifier or additive use); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
 (adjuvant comprises droplets of; combination vaccine for protection against ***Lawsonia*** intracellularis, Mycoplasma hyopneumoniae and porcine circo virus)

IT Medical goods
 (biodegradable, oil, adjuvant comprises droplets of; combination vaccine for protection against ***Lawsonia*** intracellularis, Mycoplasma hyopneumoniae and porcine circo virus)

IT ***Lawsonia*** intracellularis
 (carbohydrate compn. from killed; combination vaccine for protection against ***Lawsonia*** intracellularis, Mycoplasma hyopneumoniae and porcine circo virus)

IT Carbohydrates
 RL: AGR (Agricultural use); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
 (carbohydrate-contg. compn. from outer cell membrane, ***Lawsonia*** antigen from; combination vaccine for protection against ***Lawsonia*** intracellularis, Mycoplasma hyopneumoniae and porcine circo virus)

IT Respiratory system disease
 (chronic, M. hyopneumoniae-assocd.; combination vaccine for protection against ***Lawsonia*** intracellularis, Mycoplasma hyopneumoniae and porcine circo virus)

IT Mycoplasma hyopneumoniae
 Porcine circovirus
 Vaccines
 (combination vaccine for protection against ***Lawsonia*** intracellularis, Mycoplasma hyopneumoniae and porcine circo virus)

IT Antigens
 RL: AGR (Agricultural use); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
 (combination; combination vaccine for protection against ***Lawsonia*** intracellularis, Mycoplasma hyopneumoniae and porcine circo virus)

IT Biodegradable materials
 (medical, oil, adjuvant comprises droplets of; combination vaccine for protection against ***Lawsonia*** intracellularis, Mycoplasma hyopneumoniae and porcine circo virus)

IT Immune adjuvants
 (oil in water, contg. oil droplets of sub-micrometer size.; combination vaccine for protection against ***Lawsonia*** intracellularis, Mycoplasma hyopneumoniae and porcine circo virus)

IT Microemulsions
 (oil-in-water, biodegradable oil-in-water, adjuvants; combination vaccine for protection against ***Lawsonia*** intracellularis, Mycoplasma hyopneumoniae and porcine circo virus)

IT Cell membrane
 (outer, ***Lawsonia*** antigen from carbohydrate-contg. compn. from; combination vaccine for protection against ***Lawsonia*** intracellularis, Mycoplasma hyopneumoniae and porcine circo virus)

IT Disease, animal
 (postweaning multisystemic wasting syndrome, porcine circo virus-assocd.; combination vaccine for protection against ***Lawsonia*** intracellularis, Mycoplasma hyopneumoniae and porcine circo virus)

IT Intestinal disease
 (proliferative, L. intracellularis-assocd.; combination vaccine for protection against ***Lawsonia*** intracellularis, Mycoplasma hyopneumoniae and porcine circo virus)

IT Immunization
 (vaccination, systemic; combination vaccine for protection against ***Lawsonia*** intracellularis, Mycoplasma hyopneumoniae and porcine circo virus)

IT Animalia
 Animals
 Sus scrofa domestica
 Swine
 (vaccination; combination vaccine for protection against ***Lawsonia*** intracellularis, Mycoplasma hyopneumoniae and porcine circo virus)

L2 ANSWER 5 OF 11 BIOSIS COPYRIGHT (c) 2010 The Thomson Corporation on STN
 AN 2006:243704 BIOSIS <<LOGINID::20100916>>
 DN PREV200600251697

TI ***Lawsonia*** intracellularis vaccine.
 AU Jacobs, Antonius Arnoldus Christiaan [Inventor]; ***Vermeij, Paul***
 [Inventor]
 CS Kessel, Netherlands
 ASSIGNEE: Akzo Nobel N.V.
 PI US 06921536 20050726
 SO Official Gazette of the United States Patent and Trademark Office Patents,
 (JUL 26 2005)
 CODEN: OGUPE7. ISSN: 0098-1133.

DT Patent
 LA English
 ED Entered STN: 26 Apr 2006
 Last Updated on STN: 26 Apr 2006

AB The present invention relates i.a. to nucleic acid sequences encoding novel ***Lawsonia*** intracellularis proteins. It furthermore relates to DNA fragments, recombinant DNA molecules and live recombinant carriers comprising these sequences. Also it relates to host cells comprising such nucleic acid sequences, DNA fragments, recombinant DNA molecules and live recombinant carriers. Moreover, the invention relates to proteins encoded by these nucleotide sequences. The invention also relates to vaccines for combating ***Lawsonia*** intracellularis infections and methods for the preparation thereof. Finally the invention relates to diagnostic tests for the detection of ***Lawsonia*** intracellularis DNA, the detection of ***Lawsonia*** intracellularis antigens and of antibodies against ***Lawsonia*** intracellularis.

TI ***Lawsonia*** intracellularis vaccine.
 AU Jacobs, Antonius Arnoldus Christiaan [Inventor]; ***Vermeij, Paul***
 [Inventor]
 AB The present invention relates i.a. to nucleic acid sequences encoding
 novel ***Lawsonia*** intracellularis proteins. It furthermore relates
 to DNA fragments, recombinant DNA molecules and live recombinant carriers
 comprising these sequences. Also it. . . carriers. Moreover, the
 invention relates to proteins encoded by these nucleotide sequences. The
 invention also relates to vaccines for combating ***Lawsonia***
 intracellularis infections and methods for the preparation thereof.
 Finally the invention relates to diagnostic tests for the detection of
 Lawsonia intracellularis DNA, the detection of ***Lawsonia***
 intracellularis antigens and of antibodies against ***Lawsonia***
 intracellularis.
 IT Major Concepts
 Pharmacology; Clinical Immunology (Human Medicine, Medical Sciences);
 Infection; Clinical Chemistry (Allied Medical Sciences)
 IT Diseases
 Lawsonia intracellularis infection: bacterial disease,
 diagnosis
 IT Chemicals & Biochemicals
 Lawsonia intracellularis vaccine: immunologic-drug,
 immunostimulant-drug, vaccine
 IT Methods & Equipment
 Lawsonia intracellularis vaccine preparation method:
 laboratory techniques; ***Lawsonia*** intracellularis DNA detection
 method: laboratory techniques, diagnostic techniques, clinical
 techniques; ***Lawsonia*** intracellularis antigen detection
 method: laboratory techniques, diagnostic techniques, clinical
 techniques; ***Lawsonia*** intracellularis antibody detection
 method: laboratory techniques, diagnostic techniques, clinical
 techniques
 ORGN Classifier
 Facultatively Anaerobic Gram-Negative Rods 06700
 Super Taxa
 Eubacteria; Bacteria; Microorganisms
 Organism Name
 Lawsonia intracellularis (species)
 Taxa Notes
 Bacteria, Eubacteria, Microorganisms
 L2 ANSWER 6 OF 11 CAPLUS COPYRIGHT 2010 ACS on STN
 AN 2005:696935 CAPLUS <<LOGINID::20100916>>
 DN 143:192288
 TI DNA and polypeptides of ***Lawsonia*** intracellularis immunogenic
 proteins, their sequences and use in manufacturing of pig vaccines against
 L. intracellularis
 IN ***Vermeij, Paul***
 PA Akzo Nobel N. V., Neth.
 SO PCT Int. Appl., 99 pp.
 CODEN: PIXXD2
 DT Patent
 LA English
 FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 2005070958	A2	20050804	WO 2005-EP562	20050118

WO 2005070958 A3 20051124

W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH,
CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD,
GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC,
LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI,
NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY,
TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW, SM

RW: BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM,
AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK,
EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, MC, NL, PL, PT,
RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML,
MR, NE, SN, TD, TG

AU 2005206291 A1 20050804 AU 2005-206291 20050118

AU 2005206291 B2 20100603

CA 2554472 A1 20050804 CA 2005-2554472 20050118

EP 1709067 A2 20061011 EP 2005-701094 20050118

EP 1709067 B1 20100609

R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT,
IE, SI, LT, FI, RO, CY, TR, BG, CZ, EE, HU, PL, SK, IS

BR 2005007017 A 20070605 BR 2005-7017 20050118

JP 2007537721 T 20071227 JP 2006-550044 20050118

AT 470673 T 20100615 AT 2005-701094 20050118

MX 2006008217 A 20070523 MX 2006-8217 20060719

KR 2006134054 A 20061227 KR 2006-715908 20060807

US 20090053228 A1 20090226 US 2008-587067 20081105

PRAI EP 2004-100202 A 20040122

EP 2004-100203 A 20040122

EP 2004-100204 A 20040122

EP 2004-100205 A 20040122

EP 2004-100206 A 20040122

EP 2004-100208 A 20040122

EP 2004-100209 A 20040122

EP 2004-100210 A 20040122

EP 2004-100211 A 20040122

WO 2005-EP562 W 20050118

ASSIGNMENT HISTORY FOR US PATENT AVAILABLE IN LSUS DISPLAY FORMAT

AB The invention provides DNA mols. and polypeptides of various
Lawsonia intracellularis immunogenic proteins that were
demonstrated to bind to polyclonal pig and chicken serum. The invention
relates that said immunogenic proteins possessed mol. wts. of
75-kilodaltons (kDa), 27-kDa, 62-kDa, 57-kDa, 74-kDa, 44-kDa, 43-kDa,
26/31-kDa and 101-KDa, based on SDS-PAGE gel electrophoresis. The
invention also provides for the use of said DNA mols. and polypeptides in
manufg. of a vaccine for combating L. intracellularis infections in pigs
by inducing humoral immunity. The invention further provides antibodies
specific for said L. intracellularis immunogenic proteins, their detection
and their use in manufg. of a vaccine and/or in diagnosis. Still further,
the invention provides a vaccine comprising said L. intracellularis DNA
mols. and polypeptides and an addnl. antigen derived from pig pathogens,
such as viruses and/or microorganisms. Finally, the invention provides
the DNA and amino acid sequences of said L. intracellularis immunogenic
proteins. In the examples, the invention demonstrated that pigs immunized
with a recombinant vaccine compose of disclosed 75-kDa, 44-kDa, 26/31-kDa
and 27-kDa immunogenic proteins were protected against an L.
intracellularis challenge.

OSC.G 2 THERE ARE 2 CAPLUS RECORDS THAT CITE THIS RECORD (2 CITINGS)

TI DNA and polypeptides of ***Lawsonia*** intracellularis immunogenic

proteins, their sequences and use in manufacturing of pig vaccines against L. intracellularis

IN ***Vermeij, Paul***

AB The invention provides DNA mols. and polypeptides of various ***Lawsonia*** intracellularis immunogenic proteins that were demonstrated to bind to polyclonal pig and chicken serum. The invention relates that said immunogenic. . .

ST DNA sequence immunogenic protein gene ***Lawsonia*** use vaccine; ***Lawsonia*** antigen sequence recombinant prodn use vaccine

diagnosis;

antibody anti ***Lawsonia*** antigen use diagnosis vaccine manuf; pig humoral immunity ***Lawsonia*** immunogenic protein vaccine

IT Antigens

RL: ANT (Analyte); ARG (Analytical reagent use); BPN (Biosynthetic preparation); DGN (Diagnostic use); PRP (Properties); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); PREP (Preparation); USES (Uses)

(101-kilodalton; ***Lawsonia*** intracellularis immunogenic proteins, their sequences, recombinant prodn., diagnostic detection and use in manufg. of vaccines)

IT Gene, microbial

RL: BUU (Biological use, unclassified); PRP (Properties); THU (Therapeutic use); BIOL (Biological study); USES (Uses)

(2008; DNA and polypeptides of ***Lawsonia*** intracellularis immunogenic proteins, their sequences and use in manufg. of vaccines against L. intracellularis)

IT Antigens

RL: ANT (Analyte); ARG (Analytical reagent use); BPN (Biosynthetic preparation); DGN (Diagnostic use); PRP (Properties); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); PREP (Preparation); USES (Uses)

(26/31-kilodalton; ***Lawsonia*** intracellularis immunogenic proteins, their sequences, recombinant prodn., diagnostic detection and use in manufg. of vaccines)

IT Antigens

RL: ANT (Analyte); ARG (Analytical reagent use); BPN (Biosynthetic preparation); DGN (Diagnostic use); PRP (Properties); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); PREP (Preparation); USES (Uses)

(27-kilodalton; ***Lawsonia*** intracellularis immunogenic proteins, their sequences, recombinant prodn., diagnostic detection and use in manufg. of vaccines)

IT Gene, microbial

RL: BUU (Biological use, unclassified); PRP (Properties); THU (Therapeutic use); BIOL (Biological study); USES (Uses)

(3123; DNA and polypeptides of ***Lawsonia*** intracellularis immunogenic proteins, their sequences and use in manufg. of vaccines against L. intracellularis)

IT Antigens

RL: ANT (Analyte); ARG (Analytical reagent use); BPN (Biosynthetic preparation); DGN (Diagnostic use); PRP (Properties); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); PREP (Preparation); USES (Uses)

(43-kilodalton; ***Lawsonia*** intracellularis immunogenic proteins, their sequences, recombinant prodn., diagnostic detection and use in manufg. of vaccines)

IT Gene, microbial

RL: BUU (Biological use, unclassified); PRP (Properties); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
 (4320; DNA and polypeptides of ***Lawsonia*** intracellularis immunogenic proteins, their sequences and use in manufg. of vaccines against L. intracellularis)

IT Antigens
 RL: ANT (Analyte); ARG (Analytical reagent use); BPN (Biosynthetic preparation); DGN (Diagnostic use); PRP (Properties); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); PREP (Preparation); USES (Uses)
 (44-kilodalton; ***Lawsonia*** intracellularis immunogenic proteins, their sequences, recombinant prodn., diagnostic detection and use in manufg. of vaccines)

IT Gene, microbial
 RL: BUU (Biological use, unclassified); PRP (Properties); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
 (4423; DNA and polypeptides of ***Lawsonia*** intracellularis immunogenic proteins, their sequences and use in manufg. of vaccines against L. intracellularis)

IT Gene, microbial
 RL: BUU (Biological use, unclassified); PRP (Properties); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
 (5074; DNA and polypeptides of ***Lawsonia*** intracellularis immunogenic proteins, their sequences and use in manufg. of vaccines against L. intracellularis)

IT Gene, microbial
 RL: BUU (Biological use, unclassified); PRP (Properties); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
 (5293; DNA and polypeptides of ***Lawsonia*** intracellularis immunogenic proteins, their sequences and use in manufg. of vaccines against L. intracellularis)

IT Gene, microbial
 RL: BUU (Biological use, unclassified); PRP (Properties); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
 (5464; DNA and polypeptides of ***Lawsonia*** intracellularis immunogenic proteins, their sequences and use in manufg. of vaccines against L. intracellularis)

IT Gene, microbial
 RL: BUU (Biological use, unclassified); PRP (Properties); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
 (5473; DNA and polypeptides of ***Lawsonia*** intracellularis immunogenic proteins, their sequences and use in manufg. of vaccines against L. intracellularis)

IT Gene, microbial
 RL: BUU (Biological use, unclassified); PRP (Properties); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
 (5669; DNA and polypeptides of ***Lawsonia*** intracellularis immunogenic proteins, their sequences and use in manufg. of vaccines against L. intracellularis)

IT Antigens
 RL: ANT (Analyte); ARG (Analytical reagent use); BPN (Biosynthetic preparation); DGN (Diagnostic use); PRP (Properties); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); PREP (Preparation); USES (Uses)
 (57-kilodalton; ***Lawsonia*** intracellularis immunogenic proteins, their sequences, recombinant prodn., diagnostic detection and use in manufg. of vaccines)

IT Antigens
 RL: ANT (Analyte); ARG (Analytical reagent use); BPN (Biosynthetic preparation); DGN (Diagnostic use); PRP (Properties); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); PREP (Preparation); USES (Uses)
 (62-kilodalton; ***Lawsonia*** intracellularis immunogenic proteins, their sequences, recombinant prodn., diagnostic detection and use in manufg. of vaccines)

IT Antigens
 RL: ANT (Analyte); ARG (Analytical reagent use); BPN (Biosynthetic preparation); DGN (Diagnostic use); PRP (Properties); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); PREP (Preparation); USES (Uses)
 (74-kilodalton; ***Lawsonia*** intracellularis immunogenic proteins, their sequences, recombinant prodn., diagnostic detection and use in manufg. of vaccines)

IT Antigens
 RL: ANT (Analyte); ARG (Analytical reagent use); BPN (Biosynthetic preparation); DGN (Diagnostic use); PRP (Properties); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); PREP (Preparation); USES (Uses)
 (75-kilodalton; ***Lawsonia*** intracellularis immunogenic proteins, their sequences, recombinant prodn., diagnostic detection and use in manufg. of vaccines)

IT DNA sequences
 Lawsonia intracellularis
 Protein sequences
 (DNA and polypeptides of ***Lawsonia*** intracellularis immunogenic proteins, their sequences and use in manufg. of vaccines against L. intracellularis)

IT Vaccines
 (DNA and protein; DNA and polypeptides of ***Lawsonia*** intracellularis immunogenic proteins, their sequences and use in manufg. of vaccines against L. intracellularis)

IT Molecular cloning
 (***Lawsonia*** intracellularis immunogenic proteins, their sequences, recombinant prodn., diagnostic detection and use in manufg. of vaccines)

IT Promoter (genetic element)
 RL: BUU (Biological use, unclassified); BIOL (Biological study); USES (Uses)
 (***Lawsonia*** intracellularis immunogenic proteins, their sequences, recombinant prodn., diagnostic detection and use in manufg. of vaccines)

IT Immunostimulants
 (adjuvants, of vaccine; DNA and polypeptides of ***Lawsonia*** intracellularis immunogenic proteins, their sequences and use in manufg. of vaccines against L. intracellularis)

IT Antibodies and Immunoglobulins
 RL: ANT (Analyte); ARG (Analytical reagent use); DGN (Diagnostic use); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
 (anti-L.intracellularis antigen-specific; antibodies specific for ***Lawsonia*** intracellularis immunogenic proteins, their detection,
 diagnostic use and use in manufg. of vaccine)

IT Actinobacillus pleuropneumoniae

Bordetella bronchiseptica
 Brachyspira hyodysenteriae
 Erysipelothrix rhusiopathiae
 Haemophilus parasuis
 Mycoplasma hyopneumoniae
 Pasteurella multocida
 Porcine parvovirus
 Porcine transmissible gastroenteritis virus
 Pseudorabies virus
 Rotavirus
 Salmonella choleraesuis
 Streptococcus suis
 Swine influenza virus
 (antigen from; vaccines composed of ***Lawsonia*** intracellularis immunogenic proteins and/or DNA encoding said proteins, and antigens from various pig pathogens, such as)

IT Antigens
 RL: BPN (Biosynthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
 (from various pig pathogens; vaccines composed of ***Lawsonia*** intracellularis immunogenic proteins and/or DNA encoding said proteins, and antigens from various pig pathogens, such as)

IT Immunity
 (humoral; pigs immunized with vaccine composed of ***Lawsonia*** intracellularis 75-kDa, 44-kDa, 26/31-kDa and 27-kDa immunogenic proteins protected against challenge with L. intracellularis)

IT Diagnosis
 (immunodiagnosis, using antibodies; antibodies specific for ***Lawsonia*** intracellularis immunogenic proteins, their detection, diagnostic use and use in manufg. of vaccine)

IT Sus scrofa domestica
 (pigs immunized with vaccine composed of ***Lawsonia*** intracellularis 75-kDa, 44-kDa, 26/31-kDa and 27-kDa immunogenic proteins protected against challenge with L. intracellularis)

IT Intestine, disease
 (porcine proliferative; pigs immunized with vaccine composed of ***Lawsonia*** intracellularis 75-kDa, 44-kDa, 26/31-kDa and 27-kDa immunogenic proteins protected against challenge with L. intracellularis)

IT Escherichia coli
 (transformed; ***Lawsonia*** intracellularis immunogenic proteins, their sequences, recombinant prodn., diagnostic detection and use in manufg. of vaccines)

IT Immunization
 (vaccination; DNA and polypeptides of ***Lawsonia*** intracellularis immunogenic proteins, their sequences and use in manufg. of vaccines against L. intracellularis)

IT 861866-19-5P 861866-21-9P 861866-23-1P 861866-25-3P 861866-27-5P
 861866-29-7P 861866-31-1P 861866-34-4P 861866-36-6P
 RL: ANT (Analyte); ARG (Analytical reagent use); BPN (Biosynthetic preparation); DGN (Diagnostic use); PRP (Properties); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); PREP (Preparation); USES (Uses)
 (amino acid sequence; ***Lawsonia*** intracellularis immunogenic proteins, their sequences, recombinant prodn., diagnostic detection and use in manufg. of vaccines)

IT 861866-20-8 861866-22-0 861866-24-2 861866-26-4 861866-28-6
 861866-30-0 861866-32-2 861866-33-3 861866-35-5
 RL: BUU (Biological use, unclassified); PRP (Properties); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
 (nucleotide sequence; DNA and polypeptides of ***Lawsonia***
 intracellularis immunogenic proteins, their sequences and use in
 manufg. of vaccines against L. intracellularis)

IT 861867-47-2
 RL: PRP (Properties)
 (unclaimed nucleotide sequence; DNA and polypeptides of
 Lawsonia intracellularis immunogenic proteins, their sequences
 and use in manufg. of pig vaccines against L. intracellularis)

IT 861867-48-3 861867-49-4 861867-50-7 861867-51-8 861867-52-9
 861867-53-0 861867-54-1 861867-55-2 861867-56-3 861867-57-4
 861867-58-5 861867-59-6 861867-60-9 861867-61-0 861867-62-1
 861867-63-2 861867-64-3
 RL: PRP (Properties)
 (unclaimed sequence; DNA and polypeptides of ***Lawsonia***
 intracellularis immunogenic proteins, their sequences and use in
 manufg. of pig vaccines against L. intracellularis)

L2 ANSWER 7 OF 11 CAPLUS COPYRIGHT 2010 ACS on STN
 AN 2005:547615 CAPLUS <<LOGINID::20100916>>
 DN 143:76807
 TI ***Lawsonia*** intracellularis 26 kDa subunit vaccine
 IN ***Vermeij, Paul***
 PA Akzo Nobel N. V., Neth.
 SO PCT Int. Appl., 32 pp.
 CODEN: PIXXD2
 DT Patent
 LA English
 FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 2005056586	A1	20050623	WO 2004-EP53342	20041208
	W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW				
	RW: BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
	AU 2004297018	A1	20050623	AU 2004-297018	20041208
	CA 2548750	A1	20050623	CA 2004-2548750	20041208
	EP 1694698	A1	20060830	EP 2004-820075	20041208
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, FI, RO, CY, TR, BG, CZ, EE, HU, PL, SK, IS				
	BR 2004017440	A	20070306	BR 2004-17440	20041208
	JP 2007537715	T	20071227	JP 2006-543544	20041208
	US 20070212373	A1	20070913	US 2006-580709	20060525
	MX 2006006282	A	20061211	MX 2006-6282	20060602
	CN 101124241	A	20080213	CN 2004-80036743	20060609
	KR 2006112674	A	20061101	KR 2006-713035	20060629

PRAI EP 2003-104603 A 20031209
WO 2004-EP53342 W 20041208

ASSIGNMENT HISTORY FOR US PATENT AVAILABLE IN LSUS DISPLAY FORMAT

AB The present invention relates to nucleic acids encoding novel L. intracellularis proteins. It furthermore relates to DNA fragments, recombinant DNA mols., and live recombinant carriers comprising these sequences. It also relates to host cells comprising such nucleic acids, DNA fragments, recombinant DNA mols., and live recombinant carriers. Moreover, the invention relates to proteins encoded by these nucleotide sequences and to their use for the manufg. of vaccines for combating L. intracellularis infections and methods for the prepn. thereof. Finally the invention relates to diagnostic tests for the detection of L. intracellularis antigens and of antibodies against L. intracellularis.

OSC.G 1 THERE ARE 1 CAPLUS RECORDS THAT CITE THIS RECORD (1 CITINGS)

RE.CNT 4 THERE ARE 4 CITED REFERENCES AVAILABLE FOR THIS RECORD
 ALL CITATIONS AVAILABLE IN THE RE FORMAT

TI ***Lawsonia*** intracellularis 26 kDa subunit vaccine

IN ***Vermeij, Paul***

ST ***Lawsonia*** subunit vaccine sequence infection diagnosis; DNA sequence 26 kilodalton protein ***Lawsonia***

IT Proteins
 RL: BSU (Biological study, unclassified); PAC (Pharmacological activity); PRP (Properties); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
 (26 kDa; ***Lawsonia*** intracellularis subunit vaccine sequences, vaccine prepn. and use in pigs, and diagnostic test for detection of ***Lawsonia*** antibodies and antigens)

IT Actinobacillus pleuropneumoniae
 Bordetella bronchiseptica
 Brachyspira hyodysenteriae
 Erysipelothrix rhusiopathiae
 Escherichia coli
 Haemophilus parasuis
 Mycoplasma hyopneumoniae
 Pasteurella multocida
 Porcine parvovirus
 Porcine transmissible gastroenteritis virus
 Pseudorabies virus
 Rotavirus
 Salmonella cholerasuis
 Streptococcus suis
 Swine influenza virus
 (***Lawsonia*** intracellularis subunit vaccine contg. addnl. microorganism antigens and use thereof in pigs)

IT Animal virus
 Blood analysis
 DNA sequences
 Diagnosis
 Lawsonia intracellularis
 Microorganism
 Protein sequences
 Sus scrofa domestica
 Vaccines
 (***Lawsonia*** intracellularis subunit vaccine sequences, vaccine prepn. and use in pigs, and diagnostic test for detection of ***Lawsonia*** antibodies and antigens)

IT Antibodies and Immunoglobulins

Antigens
 RL: ANT (Analyte); ANST (Analytical study)
 (***Lawsonia*** intracellularis subunit vaccine sequences, vaccine
 prepn. and use in pigs, and diagnostic test for detection of
 Lawsonia antibodies and antigens)

IT DNA
 Nucleic acids
 RL: BSU (Biological study, unclassified); PRP (Properties); BIOL
 (Biological study)
 (***Lawsonia*** intracellularis subunit vaccine sequences, vaccine
 prepn. and use in pigs, and diagnostic test for detection of
 Lawsonia antibodies and antigens)

IT Promoter (genetic element)
 RL: BUU (Biological use, unclassified); BIOL (Biological study); USES
 (Uses)
 (***Lawsonia*** intracellularis subunit vaccine sequences, vaccine
 prepn. and use in pigs, and diagnostic test for detection of
 Lawsonia antibodies and antigens)

IT Immunostimulants
 (adjuvants; ***Lawsonia*** intracellularis subunit vaccine
 sequences, vaccine prepn. and use in pigs, and diagnostic test for
 detection of ***Lawsonia*** antibodies and antigens)

IT Drug delivery systems
 (carriers; ***Lawsonia*** intracellularis subunit vaccine
 sequences, vaccine prepn. and use in pigs, and diagnostic test for
 detection of ***Lawsonia*** antibodies and antigens)

IT Diagnosis
 (serodiagnosis; ***Lawsonia*** intracellularis subunit vaccine
 sequences, vaccine prepn. and use in pigs, and diagnostic test for
 detection of ***Lawsonia*** antibodies and antigens)

IT 854792-42-0
 RL: BSU (Biological study, unclassified); PAC (Pharmacological activity);
 PRP (Properties); THU (Therapeutic use); BIOL (Biological study); USES
 (Uses)
 (amino acid sequence; ***Lawsonia*** intracellularis subunit
 vaccine contg. addnl. microorganism antigens and use thereof in pigs)

IT 854792-41-9
 RL: BSU (Biological study, unclassified); PRP (Properties); BIOL
 (Biological study)
 (nucleotide sequence; ***Lawsonia*** intracellularis subunit
 vaccine contg. addnl. microorganism antigens and use thereof in pigs)

IT 854793-33-2 854793-34-3
 RL: PRP (Properties)
 (unclaimed sequence; ***lawsonia*** intracellularis 26 kDa subunit
 vaccine)

L2 ANSWER 8 OF 11 CAPLUS COPYRIGHT 2010 ACS on STN
 AN 2005:260093 CAPLUS <<LOGINID::20100916>>
 DN 142:334910
 TI ***Lawsonia*** intracellularis subunit vaccine for treatment of
 porcine proliferative enteropathy in pigs
 IN ***Vermeij, Paul***
 PA Akzo Nobel N.V., Neth.
 SO PCT Int. Appl., 55 pp.
 CODEN: PIXXD2
 DT Patent
 LA English

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 2005026200	A2	20050324	WO 2004-EP9995	20040908
	WO 2005026200	A3	20050623		
	W:	AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW			
	RW:	BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG			
	AU 2004272246	A1	20050324	AU 2004-272246	20040908
	CA 2536989	A1	20050324	CA 2004-2536989	20040908
	EP 1664100	A2	20060607	EP 2004-764938	20040908
	EP 1664100	B1	20091202		
	R:	AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, FI, RO, CY, TR, BG, CZ, EE, HU, PL, SK			
	CN 1849334	A	20061018	CN 2004-80026174	20040908
	BR 2004013857	A	20061024	BR 2004-13857	20040908
	JP 2007527706	T	20071004	JP 2006-525752	20040908
	AT 450545	T	20091215	AT 2004-764938	20040908
	ES 2335668	T3	20100331	ES 2004-764938	20040908
	US 20060286118	A1	20061221	US 2006-571490	20060309
	US 7662390	B2	20100216		
	MX 2006002850	A	20060614	MX 2006-2850	20060310
	KR 2006129163	A	20061215	KR 2006-704981	20060310
PRAI	EP 2003-77861	A	20030912		
	WO 2004-EP9995	W	20040908		

ASSIGNMENT HISTORY FOR US PATENT AVAILABLE IN LSUS DISPLAY FORMAT

AB The present invention relates to nucleic acid sequences encoding novel ***Lawsonia*** intracellularis proteins. It furthermore relates to DNA fragments, recombinant DNA mols., and live recombinant carriers comprising these sequences. Also, it relates to host cells comprising such nucleic acid sequences, DNA fragments, recombinant DNA mols., and live recombinant carriers. Moreover, the invention relates to proteins encoded by these nucleotide sequences and to their use for the manufg. of vaccines. The invention also relates to vaccines for combating L. intracellularis infections and methods for the prepn. thereof. Finally the invention relates to diagnostic tests for the detection of L. intracellularis DNA, the detection of L. intracellularis antigens, and of antibodies against L. intracellularis. The example presented relates to cloning of ***Lawsonia*** genes in T7-based expression vectors, expression of ***Lawsonia*** genes from T7 promoter in Escherichia coli, and anal. of expression products by western blot.

RE.CNT 5 THERE ARE 5 CITED REFERENCES AVAILABLE FOR THIS RECORD

ALL CITATIONS AVAILABLE IN THE RE FORMAT

TI ***Lawsonia*** intracellularis subunit vaccine for treatment of porcine proliferative enteropathy in pigs

IN ***Vermeij, Paul***

AB The present invention relates to nucleic acid sequences encoding novel ***Lawsonia*** intracellularis proteins. It furthermore relates to DNA fragments, recombinant DNA mols., and live recombinant carriers comprising

these sequences. Also, it. . . DNA, the detection of L. intracellularis antigens, and of antibodies against L. intracellularis. The example presented relates to cloning of ***Lawsonia*** genes in T7-based expression vectors, expression of ***Lawsonia*** genes from T7 promoter in Escherichia coli, and anal. of expression products by western blot.

- ST ***Lawsonia*** subunit vaccine pig proliferative enteropathy; sequence
- ***Lawsonia*** subunit vaccine
- IT Diagnosis
 - (***Lawsonia*** intracellularis DNA, antigens, and antibodies
 - detection for infection diagnosis in pigs)
- IT Actinobacillus pleuropneumoniae
- Bordetella bronchiseptica
- DNA sequences
- Erysipelothrix rhusiopathiae
- Escherichia coli
- Haemophilus parasuis
 - ***Lawsonia*** intracellularis
- Mycoplasma hyopneumoniae
- Pasteurella multocida
- Porcine parvovirus
- Porcine transmissible gastroenteritis virus
- Protein sequences
- Pseudorabies virus
- Rotavirus
- Salmonella cholerasuis
- Streptococcus suis
- Sus scrofa domestica
- Swine influenza virus
- Vaccines
 - (***Lawsonia*** intracellularis subunit vaccine for treatment of
 - porcine proliferative enteropathy in pigs)
- IT Antibodies and Immunoglobulins
 - RL: ANT (Analyte); ANST (Analytical study)
 - (***Lawsonia*** intracellularis subunit vaccine for treatment of
 - porcine proliferative enteropathy in pigs)
- IT Promoter (genetic element)
 - RL: BSU (Biological study, unclassified); BIOL (Biological study)
 - (***Lawsonia*** intracellularis subunit vaccine for treatment of
 - porcine proliferative enteropathy in pigs)
- IT Immunostimulants
 - (adjuvants; ***Lawsonia*** intracellularis subunit vaccine for
 - treatment of porcine proliferative enteropathy in pigs)
- IT Drug delivery systems
 - (carriers; ***Lawsonia*** intracellularis subunit vaccine for
 - treatment of porcine proliferative enteropathy in pigs)
- IT DNA
 - RL: PAC (Pharmacological activity); THU (Therapeutic use); BIOL
 - (Biological study); USES (Uses)
 - (fragments, live recombinant carriers; ***Lawsonia***
 - intracellularis subunit vaccine for treatment of porcine proliferative
 - enteropathy in pigs)
- IT Antigens
 - RL: PAC (Pharmacological activity); THU (Therapeutic use); BIOL
 - (Biological study); USES (Uses)
 - (microbial; ***Lawsonia*** intracellularis subunit vaccine for
 - treatment of porcine proliferative enteropathy in pigs)

IT Intestine, disease
 (porcine proliferative enteropathy; ***Lawsonia*** intracellularis
 DNA, antigens, and antibodies detection for infection diagnosis in
 pigs)

IT Diagnosis
 (serodiagnosis; ***Lawsonia*** intracellularis DNA, antigens, and
 antibodies detection for infection diagnosis in pigs)

IT 848387-35-9 848387-37-1 848452-45-9 848452-47-1 848452-49-3
 848452-51-7
 RL: BSU (Biological study, unclassified); PRP (Properties); BIOL
 (Biological study)
 (amino acid sequence; ***Lawsonia*** intracellularis DNA, antigens,
 and antibodies detection for infection diagnosis in pigs)

IT 848387-34-8 848387-36-0 848452-44-8 848452-46-0 848452-48-2
 848452-50-6
 RL: BSU (Biological study, unclassified); PRP (Properties); BIOL
 (Biological study)
 (nucleotide sequence; ***Lawsonia*** intracellularis DNA, antigens,
 and antibodies detection for infection diagnosis in pigs)

IT 848452-52-8 848452-53-9 848452-54-0 848452-55-1 848452-56-2
 848452-57-3 848452-58-4 848452-59-5 848452-60-8 848452-61-9
 848452-62-0 848452-63-1
 RL: PRP (Properties)
 (unclaimed sequence; ***Lawsonia*** intracellularis subunit vaccine
 for treatment of porcine proliferative enteropathy in pigs)

L2 ANSWER 9 OF 11 CAPLUS COPYRIGHT 2010 ACS on STN

AN 2002:503432 CAPLUS <<LOGINID::20100916>>

DN 137:77871

TI Cloning of genes for novel ***Lawsonia*** intracellularis outer
 membrane proteins and their use in preparing vaccines for porcine
 proliferative enteropathy

IN Jacobs, Antonius A. C.; ***Vermeij, Paul***

PA Akzo Nobel N.V., Neth.; Intervet International BV

SO Eur. Pat. Appl., 26 pp.

CODEN: EPXXDW

DT Patent

LA English

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
	-----	----	-----	-----	-----
PI	EP 1219711	A2	20020703	EP 2001-204919	20011214
	EP 1219711	A3	20021106		
	EP 1219711	B1	20060614		
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR				
	EP 1586646	A2	20051019	EP 2005-104073	20011214
	EP 1586646	A3	20070801		
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, FI, CY, TR				
	AT 330013	T	20060715	AT 2001-204919	20011214
	PT 1219711	E	20061031	PT 2001-204919	20011214
	ES 2266090	T3	20070301	ES 2001-204919	20011214
	CA 2365494	A1	20020620	CA 2001-2365494	20011218
	JP 2003000276	A	20030107	JP 2001-385373	20011219
	JP 4237960	B2	20090311		
	HU 2001005379	A2	20030128	HU 2001-5379	20011219

	HU 2001005379	A3	20040728		
	AU 2001097371	A	20020627	AU 2001-97371	20011220
	AU 783210	B2	20051006		
	US 20050069559	A1	20050331	US 2001-34500	20011220
	US 6921536	B2	20050726		
	US 20050250150	A1	20051110	US 2005-180997	20050713
	US 7491401	B2	20090217		
	PH 1200600523	A	20080519	PH 2006-1200600523	20061107
PRAI	EP 2000-204660	A	20001220		
	EP 2001-204919	A3	20011214		
	US 2001-34500	A3	20011220		
	US 2005-102182	B3	20050408		

ASSIGNMENT HISTORY FOR US PATENT AVAILABLE IN LSUS DISPLAY FORMAT

AB The present invention relates i.a. to nucleic acid sequences encoding novel ***Lawsonia*** intracellularis proteins. It furthermore relates to DNA fragments, recombinant DNA mols. and live recombinant carriers comprising these sequences. Also it relates to host cells comprising such nucleic acid sequences, DNA fragments, recombinant DNA mols. and live recombinant carriers. Moreover, the invention relates to proteins encoded by these nucleotide sequences. The invention also relates to vaccines for combating ***Lawsonia*** intracellularis infections and methods for the prepn. thereof. Finally the invention relates to diagnostic tests for the detection of ***Lawsonia*** intracellularis DNA, the detection of ***Lawsonia*** intracellularis antigens and of antibodies against ***Lawsonia*** intracellularis.

OSC.G 5 THERE ARE 5 CAPLUS RECORDS THAT CITE THIS RECORD (5 CITINGS)

RE.CNT 2 THERE ARE 2 CITED REFERENCES AVAILABLE FOR THIS RECORD

ALL CITATIONS AVAILABLE IN THE RE FORMAT

TI Cloning of genes for novel ***Lawsonia*** intracellularis outer membrane proteins and their use in preparing vaccines for porcine proliferative enteropathy

IN Jacobs, Antonius A. C.; ***Vermeij, Paul***

AB The present invention relates i.a. to nucleic acid sequences encoding novel ***Lawsonia*** intracellularis proteins. It furthermore relates to DNA fragments, recombinant DNA mols. and live recombinant carriers comprising these sequences. Also it. . . carriers. Moreover, the invention relates to proteins encoded by these nucleotide sequences. The invention also relates to vaccines for combating ***Lawsonia*** intracellularis infections and methods for the prepn. thereof. Finally the invention relates to diagnostic tests for the detection of ***Lawsonia*** intracellularis DNA, the detection of ***Lawsonia*** intracellularis antigens and of antibodies against ***Lawsonia*** intracellularis.

ST ***Lawsonia*** outer membrane protein gene sequence; Porcine proliferative enteropathy vaccine ***Lawsonia*** outer membrane protein gene; recombinant bacteria ***Lawsonia*** outer membrane protein gene expression vaccine

IT Eubacteria

(***Lawsonia*** OMP protein expression host; cloning of genes for novel ***Lawsonia*** intracellularis outer membrane proteins and use in prepg. vaccines for porcine proliferative enteropathy)

IT Proteins

RL: BPN (Biosynthetic preparation); BSU (Biological study, unclassified); DGN (Diagnostic use); PRP (Properties); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)

(OMP (outer membrane protein), 19/21 kDa, of ***Lawsonia*** intracellularis; cloning of genes for novel ***Lawsonia***

intracellularis outer membrane proteins and use in prepg. vaccines for porcine proliferative enteropathy)

IT Proteins
 RL: BPN (Biosynthetic preparation); BSU (Biological study, unclassified); DGN (Diagnostic use); PRP (Properties); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
 (OMP (outer membrane protein), 37 kDa, of ***Lawsonia*** intracellularis; cloning of genes for novel ***Lawsonia*** intracellularis outer membrane proteins and use in prepg. vaccines for porcine proliferative enteropathy)

IT Proteins
 RL: BPN (Biosynthetic preparation); BSU (Biological study, unclassified); DGN (Diagnostic use); PRP (Properties); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
 (OMP (outer membrane protein), 50 kDa, of ***Lawsonia*** intracellularis; cloning of genes for novel ***Lawsonia*** intracellularis outer membrane proteins and use in prepg. vaccines for porcine proliferative enteropathy)

IT Actinobacillus pleuropneumoniae
 Animal virus
 Bordetella bronchiseptica
 Erysipelothrix rhusiopathiae
 Escherichia coli
 Haemophilus parasuis
 Mycoplasma hyopneumoniae
 Pasteurella multocida
 Porcine parvovirus
 Porcine transmissible gastroenteritis virus
 Pseudorabies virus
 Rotavirus
 Salmonella choleraesuis
 Streptococcus suis
 Swine influenza virus
 (addnl. antigens of ***Lawsonia*** vaccines derived from; cloning of genes for novel ***Lawsonia*** intracellularis outer membrane proteins and use in prepg. vaccines for porcine proliferative enteropathy)

IT Immunostimulants
 (adjuvants, for ***Lawsonia*** OMP protein related vaccines; cloning of genes for novel ***Lawsonia*** intracellularis outer membrane proteins and use in prepg. vaccines for porcine proliferative enteropathy)

IT Infection
 (bacterial, of ***Lawsonia*** intracellularis; cloning of genes for novel ***Lawsonia*** intracellularis outer membrane proteins and use in prepg. vaccines for porcine proliferative enteropathy)

IT Drug delivery systems
 (carriers, for ***Lawsonia*** OMP protein related vaccines; cloning of genes for novel ***Lawsonia*** intracellularis outer membrane proteins and use in prepg. vaccines for porcine proliferative enteropathy)

IT DNA sequences
 Lawsonia intracellularis
 Molecular cloning
 Protein sequences
 (cloning of genes for novel ***Lawsonia*** intracellularis outer membrane proteins and use in prepg. vaccines for porcine proliferative

enteropathy)

IT Gene, microbial
 RL: BSU (Biological study, unclassified); DGN (Diagnostic use); PRP (Properties); THU (Therapeutic use); BIOL (Biological study); USES (Uses) (for OMP (outer membrane protein), of ***Lawsonia*** intracellularis; cloning of genes for novel ***Lawsonia*** intracellularis outer membrane proteins and use in prepg. vaccines for porcine proliferative enteropathy)

IT Vaccines
 (for porcine proliferative enteropathy (PPE); cloning of genes for novel ***Lawsonia*** intracellularis outer membrane proteins and use in prepg. vaccines for porcine proliferative enteropathy)

IT Promoter (genetic element)
 RL: BUU (Biological use, unclassified); BIOL (Biological study); USES (Uses) (in regulation of recombinant ***Lawsonia*** OMP protein; cloning of genes for novel ***Lawsonia*** intracellularis outer membrane proteins and use in prepg. vaccines for porcine proliferative enteropathy)

IT Diagnosis
 (mol., of ***Lawsonia*** intracellularis infection or PPE; cloning of genes for novel ***Lawsonia*** intracellularis outer membrane proteins and use in prepg. vaccines for porcine proliferative enteropathy)

IT Antigens
 RL: BPN (Biosynthetic preparation); DGN (Diagnostic use); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses) (of ***Lawsonia*** outer membrane proteins; cloning of genes for novel ***Lawsonia*** intracellularis outer membrane proteins and use in prepg. vaccines for porcine proliferative enteropathy)

IT Microorganism
 (pathogenic to pigs, addnl. antigens of ***Lawsonia*** vaccines derived from; cloning of genes for novel ***Lawsonia*** intracellularis outer membrane proteins and use in prepg. vaccines for porcine proliferative enteropathy)

IT Intestine, disease
 (porcine proliferative enteropathy (PPE); cloning of genes for novel ***Lawsonia*** intracellularis outer membrane proteins and use in prepg. vaccines for porcine proliferative enteropathy)

IT Antiserums
 (to ***Lawsonia*** outer membrane proteins, from rabbit; cloning of genes for novel ***Lawsonia*** intracellularis outer membrane proteins and use in prepg. vaccines for porcine proliferative enteropathy)

IT Antibodies and Immunoglobulins
 RL: DGN (Diagnostic use); THU (Therapeutic use); BIOL (Biological study); USES (Uses) (to ***Lawsonia*** outer membrane proteins; cloning of genes for novel ***Lawsonia*** intracellularis outer membrane proteins and use in prepg. vaccines for porcine proliferative enteropathy)

IT Sus scrofa domestica
 (vaccines for; cloning of genes for novel ***Lawsonia*** intracellularis outer membrane proteins and use in prepg. vaccines for porcine proliferative enteropathy)

IT 439914-48-4P 439914-50-8P 439914-52-0P
 RL: BPN (Biosynthetic preparation); BSU (Biological study, unclassified); DGN (Diagnostic use); PRP (Properties); THU (Therapeutic use); BIOL

(Biological study); PREP (Preparation); USES (Uses)
 (amino acid sequence of 19/21 kDa OMP protein internal peptide; cloning
 of genes for novel ***Lawsonia*** intracellularis outer membrane
 proteins and use in prepg. vaccines for porcine proliferative
 enteropathy)

IT 440005-72-1P 440005-74-3P
 RL: BPN (Biosynthetic preparation); BSU (Biological study, unclassified);
 DGN (Diagnostic use); PRP (Properties); THU (Therapeutic use); BIOL
 (Biological study); PREP (Preparation); USES (Uses)
 (amino acid sequence; cloning of genes for novel ***Lawsonia***
 intracellularis outer membrane proteins and use in prepg. vaccines for
 porcine proliferative enteropathy)

IT 440005-71-0 440005-73-2
 RL: BSU (Biological study, unclassified); DGN (Diagnostic use); PRP
 (Properties); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
 (nucleotide sequence; cloning of genes for novel ***Lawsonia***
 intracellularis outer membrane proteins and use in prepg. vaccines for
 porcine proliferative enteropathy)

IT 440016-39-7 440016-40-0 440016-41-1 440016-42-2 440016-43-3
 440016-44-4 440016-45-5
 RL: PRP (Properties)
 (unclaimed nucleotide sequence; cloning of genes for novel
 Lawsonia intracellularis outer membrane proteins and their use
 in prepg. vaccines for porcine proliferative enteropathy)

IT 439914-54-2 439914-56-4 439914-57-5 439914-59-7 439914-63-3
 439914-65-5 439914-67-7 439914-71-3 439914-73-5 439914-75-7
 439914-77-9 439914-79-1 439914-82-6 439914-87-1
 RL: PRP (Properties)
 (unclaimed sequence; cloning of genes for novel ***Lawsonia***
 intracellularis outer membrane proteins and their use in prepg.
 vaccines for porcine proliferative enteropathy)

L2 ANSWER 10 OF 11 JAPIO (C) 2010 JPO on STN
 AN 2003-000276 JAPIO <<LOGINID::20100916>>
 TI ***LAWSONIA*** INTRACELLULIS VACCINE
 IN JACOBS ANTONIUS ARNOLDUS C; ***VERMEIJ PAUL***
 PA AKZO NOBEL NV
 PI JP 2003000276 A 20030107 Heisei
 AI JP 2001-385373 (JP2001385373 Heisei) 20011219
 PRAI EP 2000-204660 20001220
 SO PATENT ABSTRACTS OF JAPAN (CD-ROM), Unexamined Applications, Vol. 2003
 AB PROBLEM TO BE SOLVED: To develop methods for diagnosing, preventing and
 treating swine proliferative intestinal diseases.
 SOLUTION: This invention relates to nucleic acid sequences encoding novel
 Lawsonia intracellularis proteins. It furthermore relates to DNA
 fragments, recombinant DNA molecules and live recombinant carriers
 comprising these sequences. Also it relates to host cells comprising such
 nucleic acid sequences, DNA fragments, recombinant DNA molecules and live
 recombinant carriers. Moreover, the invention relates to proteins encoded
 with these nucleotide sequences. The invention also relates to vaccines
 for combating ***Lawsonia*** intracellularis infections and methods
 for the preparation thereof. Finally, the invention relates to diagnostic
 tests for the detection of ***Lawsonia*** intracellularis DNA, the
 detection of ***Lawsonia*** intracellularis antigens and of antibodies
 against ***Lawsonia*** intracellularis.
 COPYRIGHT: (C)2003,JPO
 TI ***LAWSONIA*** INTRACELLULIS VACCINE

IN JACOBS ANTONIUS ARNOLDUS C; ***VERMEIJ PAUL***
 AB . . . methods for diagnosing, preventing and treating swine
 proliferative intestinal diseases.
 SOLUTION: This invention relates to nucleic acid sequences encoding novel
 Lawsonia intracellularis proteins. It furthermore relates to DNA
 fragments, recombinant DNA molecules and live recombinant carriers
 comprising these sequences. Also it. . . carriers. Moreover, the
 invention relates to proteins encoded with these nucleotide sequences. The
 invention also relates to vaccines for combating ***Lawsonia***
 intracellularis infections and methods for the preparation thereof.
 Finally, the invention relates to diagnostic tests for the detection of
 Lawsonia intracellularis DNA, the detection of ***Lawsonia***
 intracellularis antigens and of antibodies against ***Lawsonia***
 intracellularis.
 COPYRIGHT: (C)2003,JPO

L2 ANSWER 11 OF 11 LIFESCI COPYRIGHT 2010 CSA on STN
 AN 2010:177502 LIFESCI

TI ***Lawsonia*** intracellularis subunit vaccine
 AU ***Vermeij, Paul***

DT Patent

FS N; A; J

LA English

AB The present invention relates to nucleic acid sequences encoding novel
 Lawsonia intracellularis proteins. It furthermore relates to DNA
 fragments, recombinant DNA molecules and live recombinant carriers
 comprising these sequences. Also it relates to host cells comprising such
 nucleic acid sequences, DNA fragments, recombinant DNA molecules and live
 recombinant carriers. Moreover, the invention relates to proteins encoded
 by these nucleotide sequences and to their use for the manufacturing of
 vaccines. The invention also relates to vaccines for combating
 Lawsonia intracellularis infections and methods for the
 preparation thereof. Finally the invention relates to diagnostic tests for
 the detection of ***Lawsonia*** intracellularis DNA, the detection of
 Lawsonia intracellularis antigens and of antibodies against
 Lawsonia intracellularis.

TI ***Lawsonia*** intracellularis subunit vaccine
 AU ***Vermeij, Paul***

AB The present invention relates to nucleic acid sequences encoding novel
 Lawsonia intracellularis proteins. It furthermore relates to DNA
 fragments, recombinant DNA molecules and live recombinant carriers
 comprising these sequences. Also it. . . these nucleotide sequences and
 to their use for the manufacturing of vaccines. The invention also relates
 to vaccines for combating ***Lawsonia*** intracellularis infections
 and methods for the preparation thereof. Finally the invention relates to
 diagnostic tests for the detection of ***Lawsonia*** intracellularis
 DNA, the detection of ***Lawsonia*** intracellularis antigens and of
 antibodies against ***Lawsonia*** intracellularis.

UT Antibodies; DNA; Infection; Nucleotide sequence; Vaccines; nucleic acids;
 Lawsonia ; ***Lawsonia*** intracellularis

=> s lawsonia and intracellularis and vaccin?

L3 197 LAWSONIA AND INTRACELLULARIS AND VACCIN?

=> dup rem 13

PROCESSING COMPLETED FOR L3

L4 122 DUP REM L3 (75 DUPLICATES REMOVED)

=> s 14 and ((75 kd?)or(gene 5074)or(27 kd?)or(gene 5669)or(62 kd?)or(gene 4423)or(57 kd?)or(gene 3123)or(74 kd?)or(gene 5293)or(44 kd?)or(gene 5464)or(43 kd?)or(gene 5473)or(gene 4320) or(101 kd?)or(gene 2008))

L5 3 L4 AND ((75 KD?) OR(GENE 5074) OR(27 KD?) OR(GENE 5669) OR(62 KD?) OR(GENE 4423) OR(57 KD?) OR(GENE 3123) OR(74 KD?) OR(GENE 5293) OR(44 KD?) OR(GENE 5464) OR(43 KD?) OR(GENE 5473) OR(GENE 4320) OR(101 KD?) OR(GENE 2008))

=> dup rem 15

PROCESSING COMPLETED FOR L5

L6 3 DUP REM L5 (0 DUPLICATES REMOVED)

=> d bib ab kwic 1-

YOU HAVE REQUESTED DATA FROM 3 ANSWERS - CONTINUE? Y/(N):y

L6 ANSWER 1 OF 3 CABA COPYRIGHT 2010 CABI on STN

AN 2010:191515 CABA <<LOGINID::20100916>>

DN 20103183448

TI Analysis of antigenicity in four antigenic candidate genes of
Lawsonia ***intracellularis*** GXNN strain

AU Xiao AiHuan; Xie LiHua; Liao ChengQiu; Lan JiaNuan; Li MaoNing; Hou ShaoYi; Lu ShiYong; Huang WeiJian; Xiao, A. H.; Xie, L. H.; Liao, C. Q.; Lan, J. N.; Li, M. N.; Hou, S. Y.; Lu, S. Y.; Huang, W. J.

CS College of Animal Science and Technology, Guangxi University, Nanning 530005, China. huangweijian-1@163.com

SO Guangxi Agricultural Sciences, (2010) Vol. 41, No. 1, pp. 62-65. 6 ref.
Publisher: Editorial Department of Guangxi Agricultural Sciences. Guangxi ISSN: 1002-8161

URL: <http://www.gxaas.net>

CY China

DT Journal

LA Chinese

SL English

ED Entered STN: 9 Aug 2010

Last Updated on STN: 9 Aug 2010

AB According to the associated protein sequences of ***Lawsonia*** intracellulars published in GenBank, four pairs of primers were designed and the genes of three outer membrane proteins and one ectal lipoprotein were amplified. After constructing the prokaryotic expression vectors for four antigenic candidate genes, the prokaryotic expression, SDS-PAGE electrophoresis and Western blotting analysis were performed. The results showed that two recombination fusion proteins pET32a-LI0902 and pET32a-LI1022 could be expressed and ***57*** ***kDa*** and 37 kDa band was obtained by SDS-PAGE electrophoresis, respectively. The Western blotting analysis results showed that pET32a-LI1022 had antigenicity. These results for the first time proved that whether outer membrane proteins of ***Lawsonia*** ***intracellularis*** had antigenicity or not, and would provide theoretical basis for developing diagnostic kit and genetically engineered ***vaccine***.

TI Analysis of antigenicity in four antigenic candidate genes of
Lawsonia ***intracellularis*** GXNN strain.

AB According to the associated protein sequences of ***Lawsonia*** intracellulars published in GenBank, four pairs of primers were designed and the genes of three outer membrane proteins and one. . . Western

blotting analysis were performed. The results showed that two recombination fusion proteins pET32a-LI0902 and pET32a-LI1022 could be expressed and ***57*** ***kDa*** and 37 kDa band was obtained by SDS-PAGE electrophoresis, respectively. The Western blotting analysis results showed that pET32a-LI1022 had antigenicity. These results for the first time proved that whether outer membrane proteins of ***Lawsonia*** ***intracellularis*** had antigenicity or not, and would provide theoretical basis for developing diagnostic kit and genetically engineered ***vaccine***.

BT ***Lawsonia*** (Bacteria); Desulfovibrionaceae; Desulfovibrionales; Deltaproteobacteria; Proteobacteria; Bacteria; prokaryotes

ORGN ***Lawsonia*** ***intracellularis***

L6 ANSWER 2 OF 3 CAPLUS COPYRIGHT 2010 ACS on STN

AN 2005:696935 CAPLUS <<LOGINID::20100916>>

DN 143:192288

TI DNA and polypeptides of ***Lawsonia*** ***intracellularis*** immunogenic proteins, their sequences and use in manufacturing of pig ***vaccines*** against L. ***intracellularis***

IN Vermeij, Paul

PA Akzo Nobel N. V., Neth.

SO PCT Int. Appl., 99 pp.

CODEN: PIXXD2

DT Patent

LA English

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 2005070958	A2	20050804	WO 2005-EP562	20050118
	WO 2005070958	A3	20051124		
	W:	AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW,	SM		
	RW:	BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG			
	AU 2005206291	A1	20050804	AU 2005-206291	20050118
	AU 2005206291	B2	20100603		
	CA 2554472	A1	20050804	CA 2005-2554472	20050118
	EP 1709067	A2	20061011	EP 2005-701094	20050118
	EP 1709067	B1	20100609		
	R:	AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, FI, RO, CY, TR, BG, CZ, EE, HU, PL, SK, IS			
	BR 2005007017	A	20070605	BR 2005-7017	20050118
	JP 2007537721	T	20071227	JP 2006-550044	20050118
	AT 470673	T	20100615	AT 2005-701094	20050118
	MX 2006008217	A	20070523	MX 2006-8217	20060719
	KR 2006134054	A	20061227	KR 2006-715908	20060807
	US 20090053228	A1	20090226	US 2008-587067	20081105
PRAI	EP 2004-100202	A	20040122		
	EP 2004-100203	A	20040122		
	EP 2004-100204	A	20040122		

EP 2004-100205	A	20040122
EP 2004-100206	A	20040122
EP 2004-100208	A	20040122
EP 2004-100209	A	20040122
EP 2004-100210	A	20040122
EP 2004-100211	A	20040122
WO 2005-EP562	W	20050118

ASSIGNMENT HISTORY FOR US PATENT AVAILABLE IN LSUS DISPLAY FORMAT

AB The invention provides DNA mols. and polypeptides of various
 Lawsonia ***intracellularis*** immunogenic proteins that were
 demonstrated to bind to polyclonal pig and chicken serum. The invention
 relates that said immunogenic proteins possessed mol. wts. of
 75-kilodaltons (kDa), ***27*** - ***kDa*** , ***62*** - ***kDa***
 , ***57*** - ***kDa*** , ***74*** - ***kDa*** , ***44*** -
 kDa , ***43*** - ***kDa*** , 26/31-kDa and ***101*** -
 KDa , based on SDS-PAGE gel electrophoresis. The invention also
 provides for the use of said DNA mols. and polypeptides in manufg. of a
 vaccine for combating L. ***intracellularis*** infections in
 pigs by inducing humoral immunity. The invention further provides
 antibodies specific for said L. ***intracellularis*** immunogenic
 proteins, their detection and their use in manufg. of a ***vaccine***
 and/or in diagnosis. Still further, the invention provides a
 vaccine comprising said L. ***intracellularis*** DNA mols.

and

polypeptides and an addnl. antigen derived from pig pathogens, such as
 viruses and/or microorganisms. Finally, the invention provides the DNA
 and amino acid sequences of said L. ***intracellularis*** immunogenic
 proteins. In the examples, the invention demonstrated that pigs immunized
 with a recombinant ***vaccine*** compose of disclosed ***75*** -
 kDa , ***44*** - ***kDa*** , 26/31-kDa and ***27*** -
 kDa immunogenic proteins were protected against an L.
 intracellularis challenge.

OSC.G 2 THERE ARE 2 CAPLUS RECORDS THAT CITE THIS RECORD (2 CITINGS)

TI DNA and polypeptides of ***Lawsonia*** ***intracellularis***
 immunogenic proteins, their sequences and use in manufacturing of pig
 vaccines against L. ***intracellularis***

AB The invention provides DNA mols. and polypeptides of various
 Lawsonia ***intracellularis*** immunogenic proteins that were
 demonstrated to bind to polyclonal pig and chicken serum. The invention
 relates that said immunogenic proteins possessed mol. wts. of
 75-kilodaltons (kDa), ***27*** - ***kDa*** , ***62*** - ***kDa***
 , ***57*** - ***kDa*** , ***74*** - ***kDa*** , ***44*** -
 kDa , ***43*** - ***kDa*** , 26/31-kDa and ***101*** -
 KDa , based on SDS-PAGE gel electrophoresis. The invention also
 provides for the use of said DNA mols. and polypeptides in manufg. of a
 vaccine for combating L. ***intracellularis*** infections in
 pigs by inducing humoral immunity. The invention further provides
 antibodies specific for said L. ***intracellularis*** immunogenic
 proteins, their detection and their use in manufg. of a ***vaccine***
 and/or in diagnosis. Still further, the invention provides a
 vaccine comprising said L. ***intracellularis*** DNA mols.

and

polypeptides and an addnl. antigen derived from pig pathogens, such as
 viruses and/or microorganisms. Finally, the invention provides the DNA
 and amino acid sequences of said L. ***intracellularis*** immunogenic
 proteins. In the examples, the invention demonstrated that pigs immunized
 with a recombinant ***vaccine*** compose of disclosed ***75*** -

kDa , ***44*** - ***kDa*** , 26/31-kDa and ***27*** -
 kDa immunogenic proteins were protected against an L.
 intracellularis challenge.

ST DNA sequence immunogenic protein gene ***Lawsonia*** use
 vaccine ; ***Lawsonia*** antigen sequence recombinant prodn
 use

vaccine diagnosis; antibody anti ***Lawsonia*** antigen use
 diagnosis ***vaccine*** manuf; pig humoral immunity ***Lawsonia***
 immunogenic protein ***vaccine***

IT Antigens
 RL: ANT (Analyte); ARG (Analytical reagent use); BPN (Biosynthetic
 preparation); DGN (Diagnostic use); PRP (Properties); THU (Therapeutic
 use); ANST (Analytical study); BIOL (Biological study); PREP
 (Preparation); USES (Uses)
 (101-kilodalton; ***Lawsonia*** ***intracellularis***
 immunogenic proteins, their sequences, recombinant prodn., diagnostic
 detection and use in manufg. of ***vaccines***)

IT Gene, microbial
 RL: BUU (Biological use, unclassified); PRP (Properties); THU (Therapeutic
 use); BIOL (Biological study); USES (Uses)
 (2008; DNA and polypeptides of ***Lawsonia***
 intracellularis immunogenic proteins, their sequences and use
 in manufg. of ***vaccines*** against L. ***intracellularis***)

IT Antigens
 RL: ANT (Analyte); ARG (Analytical reagent use); BPN (Biosynthetic
 preparation); DGN (Diagnostic use); PRP (Properties); THU (Therapeutic
 use); ANST (Analytical study); BIOL (Biological study); PREP
 (Preparation); USES (Uses)
 (26/31-kilodalton; ***Lawsonia*** ***intracellularis***
 immunogenic proteins, their sequences, recombinant prodn., diagnostic
 detection and use in manufg. of ***vaccines***)

IT Antigens
 RL: ANT (Analyte); ARG (Analytical reagent use); BPN (Biosynthetic
 preparation); DGN (Diagnostic use); PRP (Properties); THU (Therapeutic
 use); ANST (Analytical study); BIOL (Biological study); PREP
 (Preparation); USES (Uses)
 (27-kilodalton; ***Lawsonia*** ***intracellularis***
 immunogenic proteins, their sequences, recombinant prodn., diagnostic
 detection and use in manufg. of ***vaccines***)

IT Gene, microbial
 RL: BUU (Biological use, unclassified); PRP (Properties); THU (Therapeutic
 use); BIOL (Biological study); USES (Uses)
 (3123; DNA and polypeptides of ***Lawsonia***
 intracellularis immunogenic proteins, their sequences and use
 in manufg. of ***vaccines*** against L. ***intracellularis***)

IT Antigens
 RL: ANT (Analyte); ARG (Analytical reagent use); BPN (Biosynthetic
 preparation); DGN (Diagnostic use); PRP (Properties); THU (Therapeutic
 use); ANST (Analytical study); BIOL (Biological study); PREP
 (Preparation); USES (Uses)
 (43-kilodalton; ***Lawsonia*** ***intracellularis***
 immunogenic proteins, their sequences, recombinant prodn., diagnostic
 detection and use in manufg. of ***vaccines***)

IT Gene, microbial
 RL: BUU (Biological use, unclassified); PRP (Properties); THU (Therapeutic
 use); BIOL (Biological study); USES (Uses)
 (4320; DNA and polypeptides of ***Lawsonia***

intracellularis immunogenic proteins, their sequences and use
in manufg. of ***vaccines*** against L. ***intracellularis***)

IT Antigens
RL: ANT (Analyte); ARG (Analytical reagent use); BPN (Biosynthetic preparation); DGN (Diagnostic use); PRP (Properties); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); PREP (Preparation); USES (Uses)
(44-kilodalton; ***Lawsonia*** ***intracellularis*** immunogenic proteins, their sequences, recombinant prodn., diagnostic detection and use in manufg. of ***vaccines***)

IT Gene, microbial
RL: BUU (Biological use, unclassified); PRP (Properties); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(4423; DNA and polypeptides of ***Lawsonia*** ***intracellularis*** immunogenic proteins, their sequences and use in manufg. of ***vaccines*** against L. ***intracellularis***)

IT Gene, microbial
RL: BUU (Biological use, unclassified); PRP (Properties); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(5074; DNA and polypeptides of ***Lawsonia*** ***intracellularis*** immunogenic proteins, their sequences and use in manufg. of ***vaccines*** against L. ***intracellularis***)

IT Gene, microbial
RL: BUU (Biological use, unclassified); PRP (Properties); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(5293; DNA and polypeptides of ***Lawsonia*** ***intracellularis*** immunogenic proteins, their sequences and use in manufg. of ***vaccines*** against L. ***intracellularis***)

IT Gene, microbial
RL: BUU (Biological use, unclassified); PRP (Properties); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(5464; DNA and polypeptides of ***Lawsonia*** ***intracellularis*** immunogenic proteins, their sequences and use in manufg. of ***vaccines*** against L. ***intracellularis***)

IT Gene, microbial
RL: BUU (Biological use, unclassified); PRP (Properties); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(5473; DNA and polypeptides of ***Lawsonia*** ***intracellularis*** immunogenic proteins, their sequences and use in manufg. of ***vaccines*** against L. ***intracellularis***)

IT Gene, microbial
RL: BUU (Biological use, unclassified); PRP (Properties); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(5669; DNA and polypeptides of ***Lawsonia*** ***intracellularis*** immunogenic proteins, their sequences and use in manufg. of ***vaccines*** against L. ***intracellularis***)

IT Antigens
RL: ANT (Analyte); ARG (Analytical reagent use); BPN (Biosynthetic preparation); DGN (Diagnostic use); PRP (Properties); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); PREP (Preparation); USES (Uses)
(57-kilodalton; ***Lawsonia*** ***intracellularis*** immunogenic proteins, their sequences, recombinant prodn., diagnostic detection and use in manufg. of ***vaccines***)

IT Antigens
RL: ANT (Analyte); ARG (Analytical reagent use); BPN (Biosynthetic preparation); DGN (Diagnostic use); PRP (Properties); THU (Therapeutic

use); ANST (Analytical study); BIOL (Biological study); PREP (Preparation); USES (Uses)
 (62-kilodalton; ***Lawsonia*** ***intracellularis***
 immunogenic proteins, their sequences, recombinant prodn., diagnostic
 detection and use in manufg. of ***vaccines***)

IT Antigens
 RL: ANT (Analyte); ARG (Analytical reagent use); BPN (Biosynthetic preparation); DGN (Diagnostic use); PRP (Properties); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); PREP (Preparation); USES (Uses)
 (74-kilodalton; ***Lawsonia*** ***intracellularis***
 immunogenic proteins, their sequences, recombinant prodn., diagnostic
 detection and use in manufg. of ***vaccines***)

IT Antigens
 RL: ANT (Analyte); ARG (Analytical reagent use); BPN (Biosynthetic preparation); DGN (Diagnostic use); PRP (Properties); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); PREP (Preparation); USES (Uses)
 (75-kilodalton; ***Lawsonia*** ***intracellularis***
 immunogenic proteins, their sequences, recombinant prodn., diagnostic
 detection and use in manufg. of ***vaccines***)

IT DNA sequences
 Lawsonia ***intracellularis***
 Protein sequences
 (DNA and polypeptides of ***Lawsonia*** ***intracellularis***
 immunogenic proteins, their sequences and use in manufg. of
 vaccines against L. ***intracellularis***)

IT ***Vaccines***
 (DNA and protein; DNA and polypeptides of ***Lawsonia***
 intracellularis immunogenic proteins, their sequences and use
 in manufg. of ***vaccines*** against L. ***intracellularis***)

IT Molecular cloning
 (***Lawsonia*** ***intracellularis*** immunogenic proteins,
 their sequences, recombinant prodn., diagnostic detection and use in
 manufg. of ***vaccines***)

IT Promoter (genetic element)
 RL: BUU (Biological use, unclassified); BIOL (Biological study); USES (Uses)
 (***Lawsonia*** ***intracellularis*** immunogenic proteins,
 their sequences, recombinant prodn., diagnostic detection and use in
 manufg. of ***vaccines***)

IT Immunostimulants
 (adjuvants, of ***vaccine*** ; DNA and polypeptides of
 Lawsonia ***intracellularis*** immunogenic proteins, their
 sequences and use in manufg. of ***vaccines*** against L.
 intracellularis)

IT Antibodies and Immunoglobulins
 RL: ANT (Analyte); ARG (Analytical reagent use); DGN (Diagnostic use); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
 (anti-L. ***intracellularis*** antigen-specific; antibodies specific
 for ***Lawsonia*** ***intracellularis*** immunogenic proteins,
 their detection, diagnostic use and use in manufg. of ***vaccine***
)

IT Actinobacillus pleuropneumoniae
 Bordetella bronchiseptica
 Brachyspira hyodysenteriae

Erysipelothrix rhusiopathiae
 Haemophilus parasuis
 Mycoplasma hyopneumoniae
 Pasteurella multocida
 Porcine parvovirus
 Porcine transmissible gastroenteritis virus
 Pseudorabies virus
 Rotavirus
 Salmonella choleraesuis
 Streptococcus suis
 Swine influenza virus
 (antigen from; ***vaccines*** composed of ***Lawsonia***
 intracellularis immunogenic proteins and/or DNA encoding said
 proteins, and antigens from various pig pathogens, such as)

IT Antigens
 RL: BPN (Biosynthetic preparation); THU (Therapeutic use); BIOL
 (Biological study); PREP (Preparation); USES (Uses)
 (from various pig pathogens; ***vaccines*** composed of
 Lawsonia ***intracellularis*** immunogenic proteins and/or
 DNA encoding said proteins, and antigens from various pig pathogens,
 such as)

IT Immunity
 (humoral; pigs immunized with ***vaccine*** composed of
 Lawsonia ***intracellularis*** ***75*** - ***kDa*** ,
 44 - ***kDa*** , 26/31-kDa and ***27*** - ***kDa***
 immunogenic proteins protected against challenge with L.
 intracellularis)

IT Diagnosis
 (immunodiagnosis, using antibodies; antibodies specific for
 Lawsonia ***intracellularis*** immunogenic proteins, their
 detection, diagnostic use and use in manufg. of ***vaccine***)

IT Sus scrofa domestica
 (pigs immunized with ***vaccine*** composed of ***Lawsonia***
 intracellularis ***75*** - ***kDa*** , ***44*** -
 kDa , 26/31-kDa and ***27*** - ***kDa*** immunogenic
 proteins protected against challenge with L. ***intracellularis***)

IT Intestine, disease
 (porcine proliferative; pigs immunized with ***vaccine*** composed
 of ***Lawsonia*** ***intracellularis*** ***75*** -
 kDa , ***44*** - ***kDa*** , 26/31-kDa and ***27*** -
 kDa immunogenic proteins protected against challenge with L.
 intracellularis)

IT Escherichia coli
 (transformed; ***Lawsonia*** ***intracellularis*** immunogenic
 proteins, their sequences, recombinant prodn., diagnostic detection and
 use in manufg. of ***vaccines***)

IT Immunization
 (***vaccination*** ; DNA and polypeptides of ***Lawsonia***
 intracellularis immunogenic proteins, their sequences and use
 in manufg. of ***vaccines*** against L. ***intracellularis***)

IT 861866-19-5P 861866-21-9P 861866-23-1P 861866-25-3P 861866-27-5P
 861866-29-7P 861866-31-1P 861866-34-4P 861866-36-6P
 RL: ANT (Analyte); ARG (Analytical reagent use); BPN (Biosynthetic
 preparation); DGN (Diagnostic use); PRP (Properties); THU (Therapeutic
 use); ANST (Analytical study); BIOL (Biological study); PREP
 (Preparation); USES (Uses)
 (amino acid sequence; ***Lawsonia*** ***intracellularis***

immunogenic proteins, their sequences, recombinant prodn., diagnostic detection and use in manufg. of ***vaccines***)

IT 861866-20-8 861866-22-0 861866-24-2 861866-26-4 861866-28-6
861866-30-0 861866-32-2 861866-33-3 861866-35-5
RL: BUU (Biological use, unclassified); PRP (Properties); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(nucleotide sequence; DNA and polypeptides of ***Lawsonia***
intracellularis immunogenic proteins, their sequences and use
in manufg. of ***vaccines*** against L. ***intracellularis***)

IT 861867-47-2
RL: PRP (Properties)
(unclaimed nucleotide sequence; DNA and polypeptides of
Lawsonia ***intracellularis*** immunogenic proteins, their
sequences and use in manufg. of pig ***vaccines*** against L.
intracellularis)

IT 861867-48-3 861867-49-4 861867-50-7 861867-51-8 861867-52-9
861867-53-0 861867-54-1 861867-55-2 861867-56-3 861867-57-4
861867-58-5 861867-59-6 861867-60-9 861867-61-0 861867-62-1
861867-63-2 861867-64-3
RL: PRP (Properties)
(unclaimed sequence; DNA and polypeptides of ***Lawsonia***
intracellularis immunogenic proteins, their sequences and use
in manufg. of pig ***vaccines*** against L. ***intracellularis***
)

L6 ANSWER 3 OF 3 CAPLUS COPYRIGHT 2010 ACS on STN

AN 2002:256061 CAPLUS <<LOGINID::20100916>>

DN 136:261820

TI Swine ***vaccines*** for proliferative ileitis comprising
Lawsonia ***intracellularis*** antigens

PA University of Arizona, Board of Regents, USA

SO PCT Int. Appl., 43 pp.

CODEN: PIXXD2

DT Patent

LA English

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 2002026250	A2	20020404	WO 2001-US30284	20010927
	WO 2002026250	A3	20030501		
	W:	AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CR, CU, CZ, DE, DK, DM, DZ, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, UZ, VN, YU, ZA, ZW			
	RW:	GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG			
	CA 2423588	A1	20020404	CA 2001-2423588	20010927
	AU 2001093151	A	20020408	AU 2001-93151	20010927
	EP 1324768	A2	20030709	EP 2001-973589	20010927
	R:	AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR			
	HU 2003003655	A2	20040301	HU 2003-3655	20010927
	JP 2004529854	T	20040930	JP 2002-530080	20010927
	AU 2001293151	B2	20051201	AU 2001-293151	20010927

US 20060193874 A1 20060831 US 2005-181484 20050714
PRAI US 2000-677108 A 20000929
WO 2001-US30284 W 20010927

ASSIGNMENT HISTORY FOR US PATENT AVAILABLE IN LSUS DISPLAY FORMAT

AB A proliferative ileitis ***vaccine*** comprising tissue culture grown
Lawsonia ***intracellularis*** and methods of making said
vaccines. Proliferative ileitis ***vaccines*** described
include those contg. whole L. ***intracellularis***, exts. of L.
intracellularis, protective immunogenic submits of L.
intracellularis, recombinant immunogens of L.
intracellularis and naked DNA of L. ***intracellularis***.
The ***vaccines*** of this invention may be inactivated or modified
live and contain adjuvants and/or stabilizers. The ***vaccines*** of
this invention may be in a liq. or lyophilized form. Also disclosed are
monoclonal antibodies which neutralize the growth of L.
intracellularis and which may be used for diagnosing

proliferative

ileitis as well as for quantitating antigen during ***vaccine***
prodn.

OSC.G 5 THERE ARE 5 CAPLUS RECORDS THAT CITE THIS RECORD (5 CITINGS)

RE.CNT 2 THERE ARE 2 CITED REFERENCES AVAILABLE FOR THIS RECORD

ALL CITATIONS AVAILABLE IN THE RE FORMAT

TI Swine ***vaccines*** for proliferative ileitis comprising
Lawsonia ***intracellularis*** antigens

AB A proliferative ileitis ***vaccine*** comprising tissue culture grown
Lawsonia ***intracellularis*** and methods of making said
vaccines. Proliferative ileitis ***vaccines*** described
include those contg. whole L. ***intracellularis***, exts. of L.
intracellularis, protective immunogenic submits of L.
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intracellularis and naked DNA of L. ***intracellularis***.
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live and contain adjuvants and/or stabilizers. The ***vaccines*** of
this invention may be in a liq. or lyophilized form. Also disclosed are
monoclonal antibodies which neutralize the growth of L.
intracellularis and which may be used for diagnosing

proliferative

ileitis as well as for quantitating antigen during ***vaccine***
prodn.

ST ***vaccine*** proliferative ileitis ***Lawsonia*** antigen
antibody swine

IT Antigens

RL: ANT (Analyte); PAC (Pharmacological activity); THU (Therapeutic use);
ANST (Analytical study); BIOL (Biological study); USES (Uses)
(115-kDa; ***vaccines*** for proliferative ileitis comprising
Lawsonia ***intracellularis*** antigens which produce
antibodies in swine)

IT Antigens

RL: ANT (Analyte); PAC (Pharmacological activity); THU (Therapeutic use);
ANST (Analytical study); BIOL (Biological study); USES (Uses)
(21-kDa; ***vaccines*** for proliferative ileitis comprising
Lawsonia ***intracellularis*** antigens which produce
antibodies in swine)

IT Antigens

RL: ANT (Analyte); PAC (Pharmacological activity); THU (Therapeutic use);
ANST (Analytical study); BIOL (Biological study); USES (Uses)
(31-kDa; ***vaccines*** for proliferative ileitis comprising

Lawsonia ***intracellularis*** antigens which produce
 antibodies in swine)

IT Antigens
 RL: ANT (Analyte); PAC (Pharmacological activity); THU (Therapeutic use);
 ANST (Analytical study); BIOL (Biological study); USES (Uses)
 (41-kDa; ***vaccines*** for proliferative ileitis comprising
 Lawsonia ***intracellularis*** antigens which produce
 antibodies in swine)

IT Antigens
 RL: ANT (Analyte); PAC (Pharmacological activity); THU (Therapeutic use);
 ANST (Analytical study); BIOL (Biological study); USES (Uses)
 (***43*** - ***kDa*** ; ***vaccines*** for proliferative
 ileitis comprising ***Lawsonia*** ***intracellularis***
 antigens which produce antibodies in swine)

IT Antigens
 RL: ANT (Analyte); PAC (Pharmacological activity); THU (Therapeutic use);
 ANST (Analytical study); BIOL (Biological study); USES (Uses)
 (***44*** - ***kDa*** ; ***vaccines*** for proliferative
 ileitis comprising ***Lawsonia*** ***intracellularis***
 antigens which produce antibodies in swine)

IT Antigens
 RL: ANT (Analyte); PAC (Pharmacological activity); THU (Therapeutic use);
 ANST (Analytical study); BIOL (Biological study); USES (Uses)
 (60-kDa; ***vaccines*** for proliferative ileitis comprising
 Lawsonia ***intracellularis*** antigens which produce
 antibodies in swine)

IT Antigens
 RL: ANT (Analyte); PAC (Pharmacological activity); THU (Therapeutic use);
 ANST (Analytical study); BIOL (Biological study); USES (Uses)
 (71-kDa; ***vaccines*** for proliferative ileitis comprising
 Lawsonia ***intracellularis*** antigens which produce
 antibodies in swine)

IT Antigens
 RL: ANT (Analyte); PAC (Pharmacological activity); THU (Therapeutic use);
 ANST (Analytical study); BIOL (Biological study); USES (Uses)
 (>115-kDa; ***vaccines*** for proliferative ileitis comprising
 Lawsonia ***intracellularis*** antigens which produce
 antibodies in swine)

IT Immunostimulants
 (adjuvants; ***vaccines*** for proliferative ileitis comprising
 Lawsonia ***intracellularis*** antigens which produce
 antibodies in swine)

IT Lipids, biological studies
 Polymers, biological studies
 RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
 (as adjuvant; ***vaccines*** for proliferative ileitis comprising
 Lawsonia ***intracellularis*** antigens which produce
 antibodies in swine)

IT Detergents
 Heat
 (as inactivating agent; ***vaccines*** for proliferative ileitis
 comprising ***Lawsonia*** ***intracellularis*** antigens which
 produce antibodies in swine)

IT Temperature
 (cold, as inactivating agent; ***vaccines*** for proliferative
 ileitis comprising ***Lawsonia*** ***intracellularis***
 antigens which produce antibodies in swine)

IT Immunoassay
 (enzyme-linked immunosorbent assay; ***vaccines*** for
 proliferative ileitis comprising ***Lawsonia***
 intracellularis antigens which produce antibodies in swine)

IT Inflammation
 Intestine, disease
 (ileitis, proliferative; ***vaccines*** for proliferative ileitis
 comprising ***Lawsonia*** ***intracellularis*** antigens which
 produce antibodies in swine)

IT Antibodies and Immunoglobulins
 RL: ARG (Analytical reagent use); BPN (Biosynthetic preparation); ANST
 (Analytical study); BIOL (Biological study); PREP (Preparation); USES
 (Uses)
 (monoclonal; ***vaccines*** for proliferative ileitis comprising
 Lawsonia ***intracellularis*** antigens which produce
 antibodies in swine)

IT Emulsions
 (oil-in-water, as adjuvant; ***vaccines*** for proliferative
 ileitis comprising ***Lawsonia*** ***intracellularis***
 antigens which produce antibodies in swine)

IT Diagnosis
 Epitopes
 Fluorescence immunoassay
 Genetic vectors
 Lawsonia ***intracellularis***
 PCR (polymerase chain reaction)
 Sus scrofa domestica
 Vaccines
 (***vaccines*** for proliferative ileitis comprising
 Lawsonia ***intracellularis*** antigens which produce
 antibodies in swine)

IT Antigens
 RL: ANT (Analyte); PAC (Pharmacological activity); THU (Therapeutic use);
 ANST (Analytical study); BIOL (Biological study); USES (Uses)
 (***vaccines*** for proliferative ileitis comprising
 Lawsonia ***intracellularis*** antigens which produce
 antibodies in swine)

IT Antibodies and Immunoglobulins
 DNA
 RL: BSU (Biological study, unclassified); BIOL (Biological study)
 (***vaccines*** for proliferative ileitis comprising
 Lawsonia ***intracellularis*** antigens which produce
 antibodies in swine)

IT Emulsions
 (water-in-oil-in-water, as adjuvant; ***vaccines*** for
 proliferative ileitis comprising ***Lawsonia***
 intracellularis antigens which produce antibodies in swine)

IT 9003-01-4D, crosslinked
 RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
 (Carbopol, as adjuvant; ***vaccines*** for proliferative ileitis
 comprising ***Lawsonia*** ***intracellularis*** antigens which
 produce antibodies in swine)

IT 7784-30-7, Aluminum phosphate 10043-01-3, Aluminum sulfate 21645-51-2,
 Aluminum hydroxide, biological studies 189200-69-9, Polygen
 210692-07-2, Emulsigen 405075-93-6, Havlogen 405076-88-2, Emulsigen
 Plus
 RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)

(as adjuvant; ***vaccines*** for proliferative ileitis comprising
Lawsonia ***intracellularis*** antigens which produce
antibodies in swine)

IT 50-00-0, Formalin, biological studies 57-57-8, .beta.-Propiolactone
27233-25-6, Ethylenimine dimer

RL: BSU (Biological study, unclassified); BIOL (Biological study)
(as inactivating agent; ***vaccines*** for proliferative ileitis
comprising ***Lawsonia*** ***intracellularis*** antigens which
produce antibodies in swine)